

# **ANTI-SURF HEAD ON DRY-TYPE SNORKEL**

## **BACKGROUND OF THE INVENTION**

### **(a) FIELD OF THE INVENTION**

The present invention relates to an improved anti-surf head. Its  
5 peculiar structures are formed by an air chamber formed in a lid to keep an  
upright floating and by guiding grooves formed on a bottom of a partition  
to facilitate draining water out of a snorkel.

The dry-type snorkel prevents seawater from entering the snorkel by  
forming a buoy in a chamber, which can shut a water inlet hole off when  
10 floating.

### **(B) DESCRIPTION OF THE PRIOR ART**

Referring to FIG. 1-4. Common deficiencies in conventional anti-surf  
heads 100, 200, 300, and 400, each with a vertically positioned buoy 101,  
201, 301, and 401, respectively, are as follows,

- 15 1. A water inlet hole is easy to shut off when an excessive slant of the  
anti-surf head occurs, thereby affecting a smooth breathing.
2. Seawater is easy to enter a snorkel when shutting off of the buoy is not  
quickly enough against high surf.
3. Partial retro-flow caused by a blockage of a lid can be formed when  
20 draining water out of the snorkel, thereby adding much effort to drain  
water.

## **SUMMARY OF THE INVENTION**

The present invention relates to an anti-surf head. Its peculiar  
structures are formed by an air chamber formed in a lid to keep an upright  
25 floating, thereby preventing a buoy from fast shutting off or preventing

seawater from entering a snorkel easily, and also by guiding grooves formed on a bottom of a partition to facilitate draining water out of the snorkel without causing retro-flow.

To enable a further understanding of the said objectives and the technological methods of the invention herein, the brief description of the drawings below is followed by the detailed description of the preferred embodiments.

### **BRIEF DESCRIPTION OF THE DRAWING**

FIG. 1 shows a perspective view of a conventional anti-surf head.

10 FIG. 2 shows a perspective view of another conventional anti-surf head.

FIG. 3 shows a perspective view of another conventional anti-surf head.

FIG. 4 shows a perspective view of another conventional anti-surf head.

FIG. 5 shows a perspective view of the present invention.

FIG. 6 shows an exploded elevational view of the present invention.

15 FIG. 7 shows a partition's bottom view of the present invention

FIG. 8 shows a partition's cross-sectional view of the present invention.

### **DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

Referring to FIG. 5 ~ 8. The present invention is an anti-surf head 2  
20 on a snorkel 1 comprising  
an anti-surf head body 21, wherein,  
two holes 211 formed on a bottom pipe to engaged with two tapers 111  
formed on the inner perimeter of an end 11 on the snorkel 1;  
a pipe 212 formed above the bottom pipe;  
25 a chamber 213 formed adjacent to the pipe 212;

a cylinder container 214 formed atop the chamber 213 and the pipe 212 to connect between, wherein an external thread 215, with an anti-water O-ring 2151, formed atop an outer perimeter;

a buoy 22 formed inside the chamber 213, wherein, a packing 221 formed on a top and openings 2131 formed on a bottom and a lateral, thereby floating the buoy 22 when air or water flowing inside thereof;

a partition 23 formed on a bottom of the cylinder container 214, wherein, arced guiding grooves 234 formed on a bottom and a tube 231 extending inside the chamber 213 formed underneath, with a bottom opening 233 and a lateral opening 232, opening to the cylinder 214, formed thereof;

a lid 24 formed atop the anti-surf head 2, wherein, an air chamber 242 formed on a top and an internal thread 241, with an anti-water O-ring 2411, formed on an inner perimeter of a bottom to engage with the external thread 215 on the cylinder container 214.

Referring to FIG. 8. When diving, buoyancy of the buoy 22 will lift up the packing 221 to block openings 233 of the tube 231, thereby preventing water inside the chamber 213 from entering the pipe 212 and further flowing to an individual's mouth.

The air chamber 242 of the anti-surf head 2 increases buoyancy to keep the anti-surf head 2 an upright floating, thereby keeping a smooth breathing by preventing the buoy 22 from fast shutting off, due to an excessive inclination of the anti-surf head 2, or preventing seawater from entering the snorkel 1 easily.

Furthermore, with guiding grooves 234 on the partition 23, water

draining from the pipe 212 to openings 2131 of the chamber 213 will be easy without causing retro-flow.

5 In summary, with the buoy forming beside the anti-surf head in the present invention, water can be drained easily from the snorkel. The air chamber increases buoyancy to keep the anti-surf head an upright floating, thereby keeping the smooth breathing by preventing the buoy from fast shutting off or preventing seawater from entering the snorkel easily. With guiding grooves, water draining from the snorkel will be easy without causing retro-flow.

10 It is of course to be understood that the embodiment described herein is merely illustrative of the principles of the invention and that a wide variety of modifications thereto may be effected by persons skilled in the art without departing from the spirit and scope of the invention as set forth in the following claims.

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